IN THE CLAIMS

Claims 1-26. (canceled)

Claim 27. (previously presented) A base station device for carrying out bidirectional data communication with a communication terminal device, the base station device comprising:

transmission means for carrying out communication of a down link to the communication terminal device by using a multi-carrier signal having data dispersed to m units of subcarriers for transmission by applying an orthogonal frequency division multiplex (OFDM);

receiving means for receiving a multi-carrier signal having the data dispersed to m or j units of subcarriers or for receiving a single-carrier signal transmitted from the communication terminal device and for demodulating the data thereof; and

discrimination means for discriminating a received signal among the multi-carrier signal using m units of subcarriers, or the multi-carrier signal using only j units of subcarriers, or the single-carrier signal, such that demodulation process g conforming to a the received signal is carried out by the receiving means eased upon a result of discrimination of the discrimination means, wherein

m is an integer not smaller than 2; and

j is an integer smaller than m,

and including error detecting means for detecting errors in the received signal before the discriminating operation.

Claim 28. (Previously Presented) The base station device as claimed in claim 27, further comprising receiving control means for controlling the receiving means to receive the multi-carrier signal to which specified j units of subcarriers are allocated or to receive the single-carrier signal to which a predetermined subcarrier is allocated and to demodulate the data thereof.

Claim 29. (Previously Presented) The base station device as claimed in claim 27, further comprising receiving control means for controlling the receiving means to receive the multi-carrier signal transmitted with the data dispersed to m units of subcarriers-at a first slot timing set within a frame having a plurality of slots and demodulate the data thereof, to receive the multi-carrier signal transmitted with the data dispersed to j units of subcarriers, or to receive the single-carrier signal at second slot timing set within the frame and to demodulate the data thereof.

Claim 30. (Canceled)

Claim 31. (Previously Presented) The base station device as claimed in claim 27, wherein the receiving means further includes a filter having a passband width corresponding to the number of subcarriers to be demodulated, to decode data from the received signal obtained through the filter.

Claim 32. (Previously Presented) The base station device as claimed in claim 27, wherein the receiving means further includes a filter having a first passband width and the filter having a second passband width broader than the first passband width, so as to receive the multi-carrier signal transmitted through the filter of the first passband width with the data dispersed to j units of subcarriers or the single-carrier signal and demodulate the data thereof, and to receive the multi-carrier signal transmitted through the filter of the second passband width with the data dispersed to m units of subcarriers and demodulate the data thereof.

Claims 33-37. (Canceled)

Claim 38. (previously presented) A communication method for carrying out bidirectional communication with a base station device, the method comprising:

carrying out communication of a down link from the base station device to a communication terminal device by using a

multi-carrier signal having data dispersed to a plurality of subcarriers for transmission by applying an orthogonal frequency division multiplex (OFDM); and

carrying out communication of an up link from the communication terminal device to the base station device by using a multi-carrier signal having data dispersed to a plurality of subcarriers for transmission or by using a single-carrier signal, wherein

at the base station device the multi-carrier signal and the single-carrier signal are discriminated between such that demodulation processing conforming to a received signal is carried out based upon a result of discrimination, and including error detecting means for detecting errors in the received signal before carrying out the discrimination operation.

Claim 39. (Previously Presented) The communication method as claimed in claim 38, wherein the communication of the up link to the base station device is carried out by using a predetermined subcarrier of the plurality of subcarriers.

Claim 40. (Previously Presented) The communication method as claimed in claim 38, wherein communication between the base station device and the communication terminal device is carried out at a slot timing set within a frame having a plurality of slots, and

the communication of the up link from the communication terminal device to the base station device is carried out by using the multi-carrier signal at a first slot timing set within the frame and by using the single-carrier signal at a second slot timing set within the frame.

Claims 41-42. (Canceled)

Claim 43. (previously presented) A communication method for carrying out bidirectional communication with a base station device, the method comprising:

carrying out communication of a down link from the base station device to a communication terminal device by using multi-carrier signal having data dispersed to m units of subcarriers for transmission by applying an orthogonal frequency division multiplex (OFDM);

carrying out communication of an up link from the communication terminal device to the base station device by using a multi-carrier signal having data dispersed to j units of subcarriers for transmission or a multi-carrier signal having data dispersed to m units of subcarriers, wherein

m is an integer not smaller than 2;

j is an integer smaller than m; and

on the side of the base station device the multi-carrier signal using m units of subcarriers and the multi-carrier signal

using j units of subcarriers are discriminated between such that demodulation processing conforming to a received signal is carried out based upon a result of discrimination; and

performing error detection before performing discrimination.

Claim 44. (Previously Presented) The communication method as claimed in claim 43, wherein communication between the base station device and the communication terminal device is carried out at a slot timing set within a frame having a plurality of slots, and

communication of the up link from the communication terminal device to the base station device is carried out in a slot allocated only to the multi-carrier signal having the data dispersed to j units of subcarriers for transmission.

Claim 45. (Previously Presented) The communication method as claimed in claim 43, wherein the communication of the up link from the communication terminal device to the base station device is carried out by using the multi-carrier signal having data dispersed to m units of subcarriers at first slot timing set within a frame and by using the multi-carrier signal having data dispersed to j units of subcarriers at a second slot timing set within the frame.

Claims 46-47. (canceled)

Claim 48. (Previously Presented) A communication method for carrying out bidirectional communication with a base station device, the method comprising:

carrying out communication of a down link from the base station device to a communication terminal device by using a multi-carrier signal having data dispersed to m units of subcarriers for transmission by applying an orthogonal frequency division multiplex (OFDM);

carrying out the communication of an up link from the communication terminal device to the base station device by using a multi-carrier signal having the data dispersed to m units of subcarriers for transmission, a multi-carrier signal having the data dispersed to j units of subcarriers for transmission or a single-carrier signal, wherein

m is an integer not smaller than 2;

j is an integer smaller than m; and

on a side of the base station device the multi-carrier signal using m units of subcarriers and the multi-carrier signal using j units of subcarriers are discriminated between such that demodulation processing conforming to a received signal is carried out based upon a result of discrimination; and

performing error detection before performing discrimination.

Claim 49. (Previously Presented) The communication method as claimed in claim 48, wherein communication between the base station device and the communication terminal device is carried out at slot timing set within a frame cycle, and

communication of the up link from the communication terminal device to the base station device is carried out in a slot allocated only to the multi-carrier signal having the data dispersed to j units of subcarriers for transmission or the single-carrier signal.

Claim 50. (Previously Presented) The communication method as claimed in claim 48, wherein the communication of the up link from the communication terminal device to the base station device is carried out by using the multi-carrier signal having the data dispersed to m units of subcarriers at a first slot timing set within a frame and by using the multi-carrier signal having the data dispersed to units of subcarriers or the single-carrier signal at second slot timing set within the frame cycle.

Claim 51. (canceled)